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EXPRESS MAIL NO.: EV 164949351US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re:	Patent Application of Darwin Prockop <i>et al.</i>	:	Group Art Unit: Not Yet Assigned
Appln. No.:	Not Yet Assigned	:	Examiner: Not Yet Assigned
Filed:	Herewith	:	
Title:	Isolated Stromal Cells and Methods of Using the Same	:	Attorney Docket No. 057616-5001-03
		:	

INFORMATION DISCLOSURE STATEMENT

It is requested that the enclosed references listed on the Information Disclosure Citation Form PTO-1449 be considered by the Patent Examiner in connection with the above-identified application and be made of record therein.

The references provided on the PTO-1449 forms and Notice of References Cited forms are not included with the present application as they were filed in prior Application No. 08/913,918, filed December 8, 1997 and Application No. 10/423,232, filed April 25, 2003.

Independent consideration and acknowledgment of the enclosed reference(s) are respectfully requested.

Respectfully submitted,

DARWIN PROCKOP, ET AL.

February 26, 2004
(Date)

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Attorney Docket Number

• 057616-5001-63

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS						
Exr Initials	Foreign Patent Document			Name of Inventor or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T ₁
	Country Code	Number	Kind Code (if known)			

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Signature	1-PH/1427273.1	Date Considered	
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Notice of References Cited	Application/Control No. Not Yet Assigned	Applicant(s)/Patent Under Reexam
	Examiner Not Yet Assigned	Art Unit

U.S. PATENT DOCUMENTS

	Document Number Country Code-Number-Kind Code	Date MM-YYYY ¹	Name	Classification ²	
A	5,858,721	1/1999	Naughton et al.	435	69.1
B					
C					
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FOREIGN PATENT DOCUMENTS

	Document Number Country Code-Number-Kind Code	Date MM-YYYY ¹	Country	Name	Classification ²
N					
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P					
Q					
R					
S					
T					

NON-PATENT DOCUMENTS

	Include, as applicable: Author, Title, Date, Publisher, Edition or Volume, Pertinent Pages	
U	Conisdine, J. Clin. Invest. Vol. 95, pp. 2986-2988, 1995	
V	Naughton, Somatic Cell and Molecular Genetics, Vol. 18, No. 5, pp. 451-462, 1992	
W	Gilbert, Transplantation, Vol. 56, 2, pp. 423-427, 1993	
X		

* A copy of this reference is not being furnished with this Office action. See MPEP 5 707.05(a).

¹ Dates in MM-YYYY format are publication dates.

² Classifications may be U.S. or foreign.

Notice of References Cited		Application/Control No.	Applicant(s)/Patent Under Reexamination	
		Not Yet Assigned	Examiner Not Yet Assigned	Art Unit Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-5962323	10-1999	Greenberger et al.	
	B	US-5670351	09-1997	Emerson et al.	
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
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FOREIGN PATENT DOCUMENTS

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	P					
	Q					
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	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Report and recommendations of the panel to assess the NIH investment in research on gene therapy Orkin et al. Dec 7, 1995
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
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	Examiner Not Yet Assigned	Art Unit Page 1 of 3

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
A	US-5,876,452	03-1999	Athannasiou et al.	623	16
B	US-6,013,853	01-2000	Athannasiou et al.	623	11
C	US-5,830,708	11-1998	Naughton	435	70.1
D	US-6,087,113	07-2000	Caplan et al.	435	7.1
E	US-5,843,431	12-1998	Schinstine et al.	424	93.21
F	US-5,197,985	03-1993	Caplan et al.	623	16
G	US-				
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FOREIGN PATENT DOCUMENTS

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N					
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Q					
R					
S					
T					

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)		
U	Hoogerbrugge et al., Bone marrow gene transfer in three patients with adenosine deaminase deficiency, 1996, Gene Therapy, Vol. 3, pages 179-183		
V	Hoeben et al., Toward Gene Therapy for Hemophilia A: Long-Term Persistence of Factor V-III-Secreting..., 1993, Human Gene Therapy, Vol. 4, pages 179-186		
W	Kohn, The current status of gene therapy using hematopoietic stem cells, 1995, Current Opinion in Pediatrics, Vol. 7, pages 56-63		
X	Onodera et al., Gene Therapy of Severe Combined Immunodeficiency Caused by Adenosine..., 1999, Acta Haematol, Vol. 101, pages 89-96		

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
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	A	US-			
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FOREIGN PATENT DOCUMENTS

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	N					
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	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Moritz et al., Bone Marrow Extracellular Matrix Molecules Improve Gene Transfer into Human Hematopoietic Cells via Retroviral Vector, April 1994, J. Clin. Invest., Vol. 93, pages 1451-1457
	V	Gronthos et al., The Biology and Application of Human Bone Marrow Stromal Cell Precursors, 1996, Journal of Hematology, Vol. 5, pages 1996
	W	Riddell et al., T-Cell mediated rejection of gene-modified HIV-specific cytotoxic T lymphocytes in HIV-infected patients, February 1996, Nature Medicine, Vol. 2, No. 2, pages 216-220
	X	Anderson, Human gene therapy, April 30, 1998, Nature, pages 25-30

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	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Verma et al., Gene therapy-promises, problems and projects, September 18, 1997, Nature, Vol. 389, pages 239-242
	V	Marshall, Gene Therapy's Growing Pains, August 25, 1995, Science, Vol. 269, pages 1050-1055
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP, § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Form PTO-1449 U.S. DEPARTMENT OF COMMERCE
(REV. 8-83) PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO.:
057616-5001-03

APPLICATION NO.: Not
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INFORMATION DISCLOSURE CITATION

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APPLICANT:

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GROUP ART UNIT: Not
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PATENT DOCUMENTS

EX. INIT	DOCU MENT	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
		4,904,259	Feb. 1990	Itay	623	16	

FOREIGN PATENT DOCUMENTS

EX. INIT	DOCU MENT	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO.

OTHER DOCUMENTS (including Author, Title, Date, Department, Pages, Etc.)

	Coccia et al., N. Eng. J. Med., 1980, 302(13):702-707
	R.F. Pereira et al., Proc. Natl. Acad. Sci. USA, 1995, 92:4857-4861
	Castro-Malaspina H. et al., Blood, 1980, 56(2):289-301

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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FOREIGN PATENT DOCUMENTS							
EX. INIT	DOCU MENT	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
		EP 0 381 490 A	August 1990	Europe			
OTHER DOCUMENTS (including Author, Title, Date, Pattern or Patent No., etc.)							
		Prockop, 1997, Science 276:71-74					
EXAMINER		DATE CONSIDERED					
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>							

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**SUPPLEMENTAL
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APPLICANT:

FILING DATE: Herewith

GROUP ART UNIT: Not
Yet Assigned

OTHER DOCUMENTS (including Author, Title, Date, and Source):

- El-Badri-Dajani et al., 1996, Cell Transplantation 5:5S2:36
- Denizot et al., 1998, Biochimica et Biophysica 1402:209-215
- Huss et al., 1995, Cell Transplantation, 4:483-491
- Kadiyala et al., 1997, Cell Transplantation 6:125-134
- Sykes and Sachs, 1990, Immunology 2:401-417

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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U.S. PATENT DOCUMENTS

EX. INIT	DOCU- MENT	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
		4,391,909	07/83	Lim, Franklin			
		4,806,355	02/89	Goosen <i>et al.</i>			
		4,997,443	03/91	Walthall <i>et al.</i>			
		4,902,295	02/90	Walthall <i>et al.</i>			
		4,942,129	07/90	Goosen <i>et al.</i>			
		5,314,471	05/94	Brauker <i>et al.</i>			
		5,334,640	08/94	Desai <i>et al.</i>			
		5,344,454	09/94	Clarke <i>et al.</i>			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Ala-Kokko <i>et al.</i> , 1991, J. Biol. Chem. 266:14175-14178
	Andersson <i>et al.</i> , 1993, Int. J. Dev. Neurosci. 11:555-568
	Andreasen <i>et al.</i> , 1988, BioTechniques 6:650-660
	Anklesaria, 1987, PNAS USA 84:7681-7685
	Applebaum <i>et al.</i> , 1992, Blood 80(6):1608-1613
	Arner, P., 1995, N. England J. Med. 333:382
	Benayahu <i>et al.</i> , 1989, J. Cell Physiol. 140:1-7
	Bennett <i>et al.</i> , 1991, J. Cell. Sci. 99:131-139
	Beresford <i>et al.</i> , 1992, J. Cell. Sci. 102:341-351
	Bienzle <i>et al.</i> , 1994, Proc. Natl. Acad. Sci USA, 91:350-354
	Bjorklund, 1993, Nature 362:414-415
	Bradham <i>et al.</i> , 1994, J. Cell Physiol. 158:61-68

EXAMINER

DATE CONSIDERED

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GROUP ART UNIT: Not
Yet Assigned

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Caplan, 1991, J. Orthop. Res. 9:641-650

Carter *et al.*, 1992, Blood 79:356-364

Castro-Malaspina *et al.*, 1980, Blood 56:289-301

Coccia, P.F. et al, 1980, New England Journal of Medicine, 302,13:702-707

Considine *et al.*, 1995, J. Clin. Invest. 95:2986-2988

Emorine, L. et al., 1994, Trends Pharmacol. Sci., 15,3

Flier, J.S., 1995, Cell, 80:15

Freed *et al.*, 1992, N. Engl. J. Med 327:1549-1555

Friedenstein *et al.*, 1987, Cell Tissue Kinet. 20:263-272

Friedenstein *et al.*, 1976, Exp. Hemat. 4:267-274

Kang *et al.*, 1993, J. Neurosci. 13:5203-5211

Khillan *et al.*, 1991, J. Biol. Chem. 266:23373-23379

Kiefer, 1991, Blood 78(10):2577-2582

Liesveld *et al.*, 1989, Blood 73:1794-1800

Liesveld *et al.*, 1990, Exp. Hematot. 19:63-70

Lowell, B.B. et al., 1995, J. Clin. Invest., 95:923

Mardon *et al.*, 1987, Cell Tissue Res. 250:157-165

Mercer *et al.*, 1992, In: Antisense Strategies, Ann. IV. Y. Acad. Sci. Biol. 660:209-218

Miller, A.D. and Rosman, G.J. 1989 BioTechniques 7:980-990

Morrison et al, 1994, Nature 367:284-287

Nakagawa, T., et al., 1993, Arthritis and Rheumatism, 36,2:263-268

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DATE CONSIDERED

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(Use several sheets if necessary)

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GROUP ART UNIT: Not
Yet AssignedNakahara *et al.*, 1991, J. Orthop. Res. 9:465-476Niedzwiedski *et al.*, 1993, Biomaterials 14:115-121O'Hara *et al.*, 1991, Exp. Hemat. 19:878-881Ohgushi *et al.*, 1989, Acte. Orthop. Scand. 60:334-339Owen *et al.*; 1988, in Cell and Molecular Biology of Vertebrate Hard Tissues, Ciba Foundation Symposium 136, Chichester, UK, pp. 42-60Pereira *et al.*, 1995, Proc. Natl. Acad. Sci. USA 92:4857-4861Pereira *et al.*, 1983, J. Clin. Invest. 91:709-716Piersma *et al.* 1983, Brit. J. Hematol. 94:285-290Piersma *et al.*, 1985, Exp. Hematol 13:237-243

Rink, T.J. et al., 1994, Nature, 372-406

Rosenstein, 1995, Exp. Neurol. 133:1-6

Simmons *et al.*, 1991, Blood 78:55-62Smith *et al.*, 1993, Mature Genet. 5:397-402Sokolov *et al.*, 1995, J. Biol. Chem. 270:9622-9629Sokolov *et al.*, 1993, Biochemistry 32:9242-9249Spencer *et al.*, 1992, N. Engl. J. Med. 327:1541-1548Stewart *et al.* 1993, Blood 81:2566-2571Toneguzzo *et al.*, 1986, Mol. Cell. Biol. 6:703-706

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(Form PTO-1449 Modified 5/95)
(Use several sheets if necessary)

APPLICANT:

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GROUP ART UNIT: Not
Yet AssignedTurner *et al.*, 1993, Neurosurg. 33:1031-1037Wakitani *et al.*, 1994, J. Bone & Surg. 76A:579-592Zhou *et al.*, 1992, J. Comp. Neurol. 317:145-155

EXAMINER

DATE CONSIDERED

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